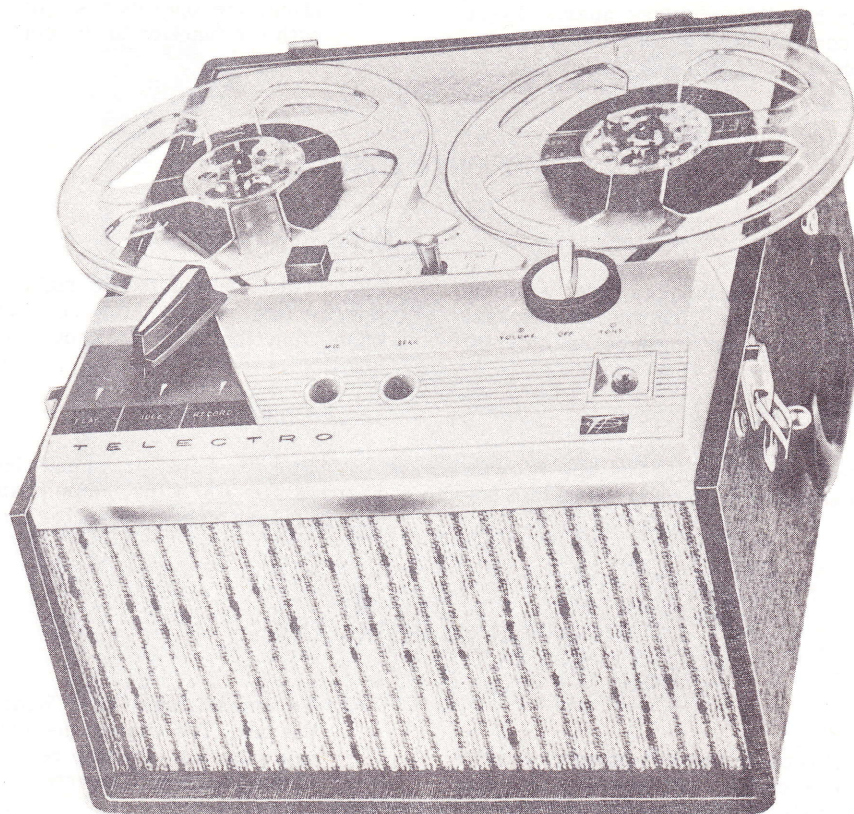
TELECTRO
MODEL 1975TELECTRO
MODEL 1975

GENERAL INFORMATION

Telectro Model 1975 tape recorder records and plays back two tracks of material on standard-width recording tape, thus doubling playing time of a 3", 5" or 7" reel with no loss of frequency response or quality. The Model 1975 has two speeds, 3 3/4 and 7 1/2 ips.

A jack is provided on the dress plate for an amplified speaker to reproduce 2-track and 4-track stereo tapes.

Using both tracks of tape, recording times are as follows:

Reel Size	3 3/4" Speed	7 1/2" Speed
3" (300 ft.)	1/2 hour	1/4 hour
5" (600 ft.)	1 hour	1/2 hour
7" (1200 ft.)	2 hours	1 hour

Connect this recorder to an outlet supplying 110-120 volts, 60 cycles AC only. Before connecting to line supply, be certain it agrees with these specifications.

Manufactured By:

Telectrosonic Corporation
35-18 37th Street,
Long Island City 1, New York

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of CQ443



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PREPARING FOR OPERATION

1. Open cover and remove power cord, microphone, empty reel, and reel of tape from storage space at rear of unit.
2. Remove cover by sliding hinges apart. Place unit so that controls are accessible and at a convenient height.
3. Plug power cord into any AC outlet having proper frequency and power requirements.
4. Recorder is now ready for use. Before operating, the operator should familiarize himself with the function of the controls.

FUNCTION OF CONTROLS

Function Control

Idle is neutral, or stationary, tape position. Turn knob to the left for Play. To record, depress Record button and hold while turning function selector knob to the right.

IMPORTANT: When recorder is not in use, function selector knob must be in Idle position.

Wind-Rewind Control

Turn control to the right for fast wind; to the left for fast rewind. Before operating Wind-Rewind knob, function selector knob must be placed in Idle position.

Speed Change Control

For 7 1/2 ips, put speed change control in down position; for 3 3/4 ips, in up position. Do not change speeds unless function selector knob is in Idle position.

OPERATING INSTRUCTIONS

Threading Tape

1. Place a reel of tape on the left (supply) spindle and an empty reel on the right (take-up) spindle, making sure the reel slots engage the spindle pins.
2. Unwind approximately 12 inches of tape from left (supply) reel. Hold a section of tape taut and insert in tape slot, making sure dull coated side of tape faces rear of recorder.
3. Insert free end of tape into one of three radial slots in hub of empty reel. Turn reel several turns counterclockwise until tape is secured to reel and all slack is taken up between reels.

To Record

Plug line cord into a convenient wall receptacle and insert microphone into input jack on top of recorder. Turn On-Off-Volume control clockwise until a click is heard and allow sufficient time for unit to warm up. Thread tape as described under "Threading Tape". Turn function selector knob to Record. Adjust Volume control until recording level indicator flashes on high peaks only. To record from radio, phonograph, or television, follow this same procedure, keeping recorder volume at a normal level. To stop tape, turn function selector knob to the Idle position.

To Wind or Rewind Tape

1. Turn function selector knob to Idle.
2. To wind tape onto reel, turn Wind-Rewind control to right and hold. Release the control when the desired section of the tape is reached.

3. To rewind tape, turn Wind-Rewind control to the left. The control need not be held as it locks into position. To stop rewind, return the Wind-Rewind knob to its center position.

To Play a Recorded Tape

1. Follow instructions under "Threading Tape".
2. Turn On-Off-Volume control clockwise until a click is heard and allow sufficient time for unit to warm up.
3. Turn function selector knob to Play.
4. Adjust Volume control for desired listening level.
5. Turn function selector knob to Idle to stop tape.

CAUTION: Do not set function selector knob to Record when Play is desired, as previously recorded portion of tape will be automatically erased.

Erasing Recorded Material

Any recording on tape is automatically erased before a new recording is put on tape when it is in Record. To erase a recording without putting anything on tape, follow normal recording procedure, but leave Volume control at its extreme counterclockwise position.

To Edit and Splice Tape

NOTE: Since one track cannot be edited and spliced without affecting the other track, recordings to be edited should be limited

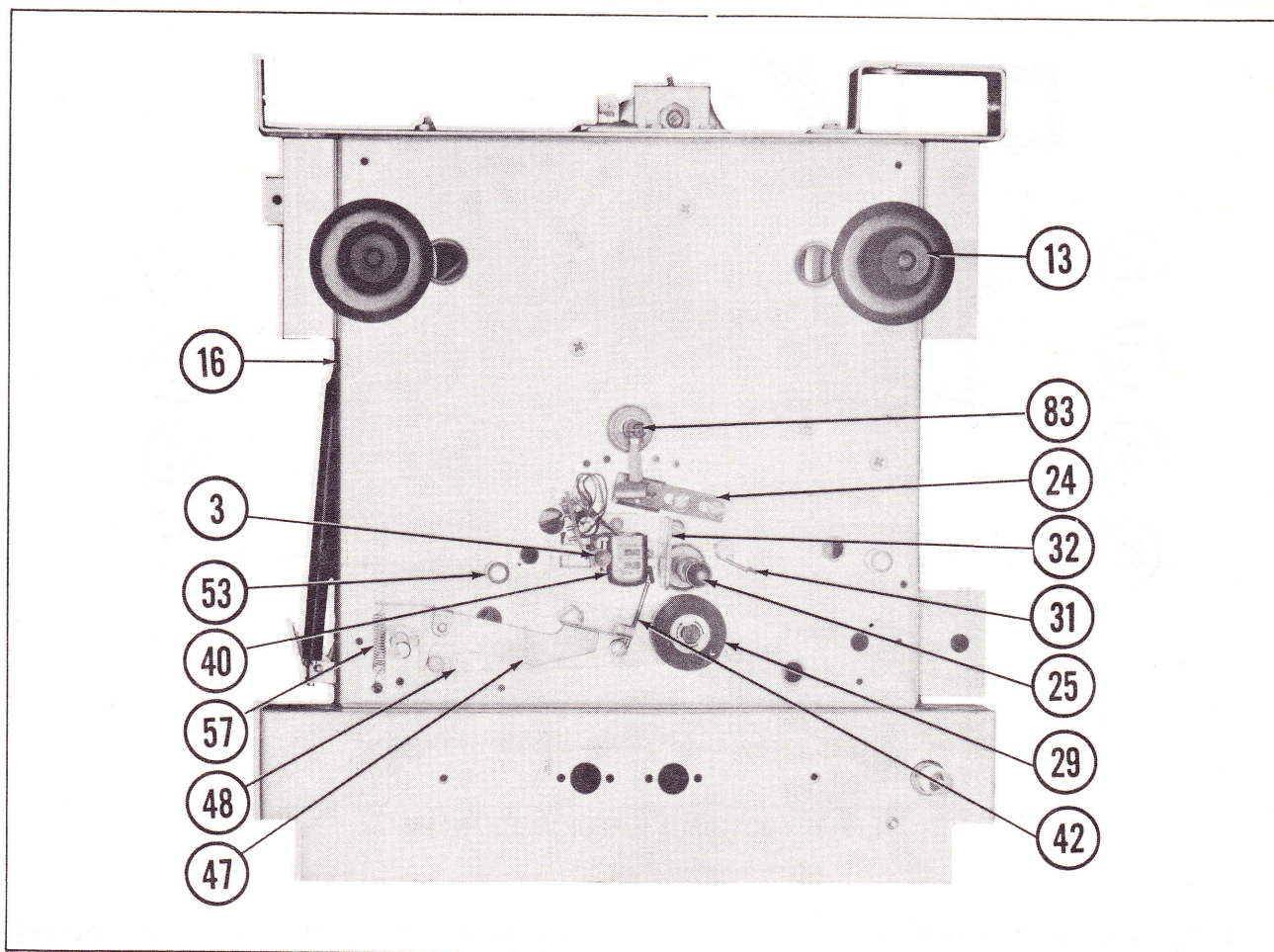


FIG.1 TOP VIEW OF MECHANISM WITH DRESS PLATE REMOVED

to one track only.

1. Tape may be edited by cutting out unwanted portions or by rejoining selections into another sequence. Announcements may be inserted between selections etc. Unused sections can be spliced for re-use.
2. For best results, cut tape at a slight diagonal, join ends with splicing tape on glossy side, and trim any excess width.

Dual-Track Recording

One-half of the tape width is recorded at a time, thereby resulting in two-track recording. This two-

track recording is accomplished in the following manner:

1. After a reel of tape has been recorded and all tape wound onto the right (takeup) reel, turn function selector knob to Idle.
2. Remove reels from recorder; turn full reel over and place it on left spindle. Place empty reel on right spindle.
3. Properly thread tape and proceed with recording.
4. After second track has been recorded, first track can be played without rewinding by reversing reel as described in step 2.

DISASSEMBLY

To Remove Recorder from Cabinet

1. Remove four screws on bottom of cabinet.
2. Remove four screws (two on each side) on sides of cabinet.
3. Lift up unit and disconnect speakers.

4. Remove unit from cabinet.

To Remove Amplifier From Tape Transport

1. Disconnect head leads.
2. Disconnect speaker jack.
3. Disconnect external amplifier jack.

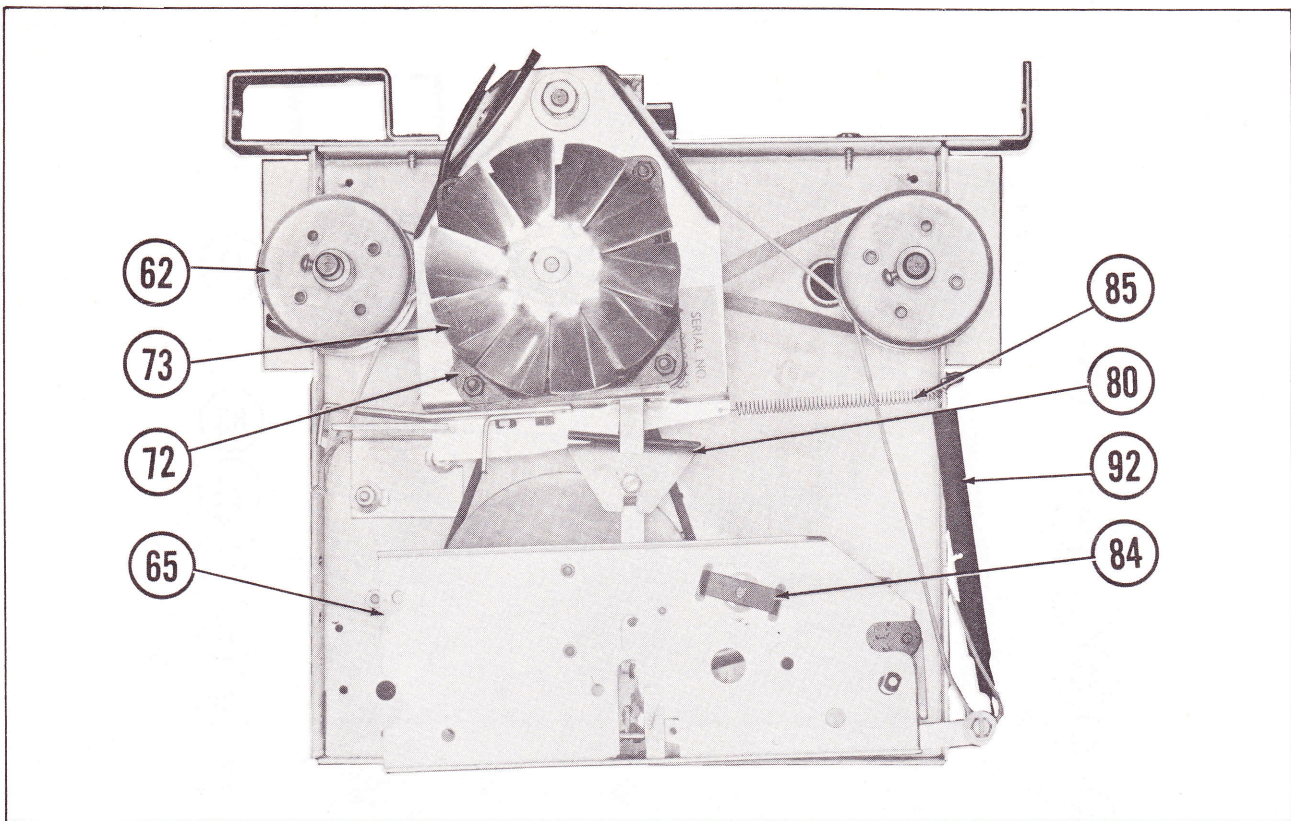


FIG. 2 BOTTOM VIEW OF MECHANISM

4. Disconnect microphone input.
5. Disconnect sound lever indicator.
6. Disconnect motor leads.
7. Remove three mounting bolts holding amplifier to tape transport.

CLEANING

Capstan roller assembly (29), capstan shaft, and recording head (40) may accumulate tape oxide coating, which wears off tape as it passes these parts. This accumulation will cause poor performance and should be removed with a soft cloth dipped in alcohol.

LUBRICATION

All moving parts have self-lubricated oilite bearings; therefore, in normal use no lubrication is necessary. When unit is disassembled, clean all bearings with a clean, soft cloth and apply a thin film of oil on bearing surfaces.

MECHANICAL ADJUSTMENTS

Play-Record Head

The recording head (40) must be aligned with the tape. If it is not, low output, loss of high frequencies, or track overlap may result.

CAUTION: The play-record head was adjusted and sealed in place at the factory. Further adjustment is unnecessary unless head becomes faulty and needs replacing. The two adjustments are made as follows:

1. Head height should be adjusted so that top edge of tape aligns evenly with top edge of record head lamination. To adjust, loosen nuts (38)

and slightly raise or lower recording head (40).

2. To adjust head for maximum frequency response, head adjustment screw (34) should be turned to the left or right. This moves the head from side to side slightly until maximum high frequencies are obtained. After adjustment, head height should be checked.

Erase Head

Erase head assembly (45) should be adjusted so that the erase magnet affects the top half of recorded tape. This adjustment should be made in the Record position. Loosen erase head adjusting screw (44) in

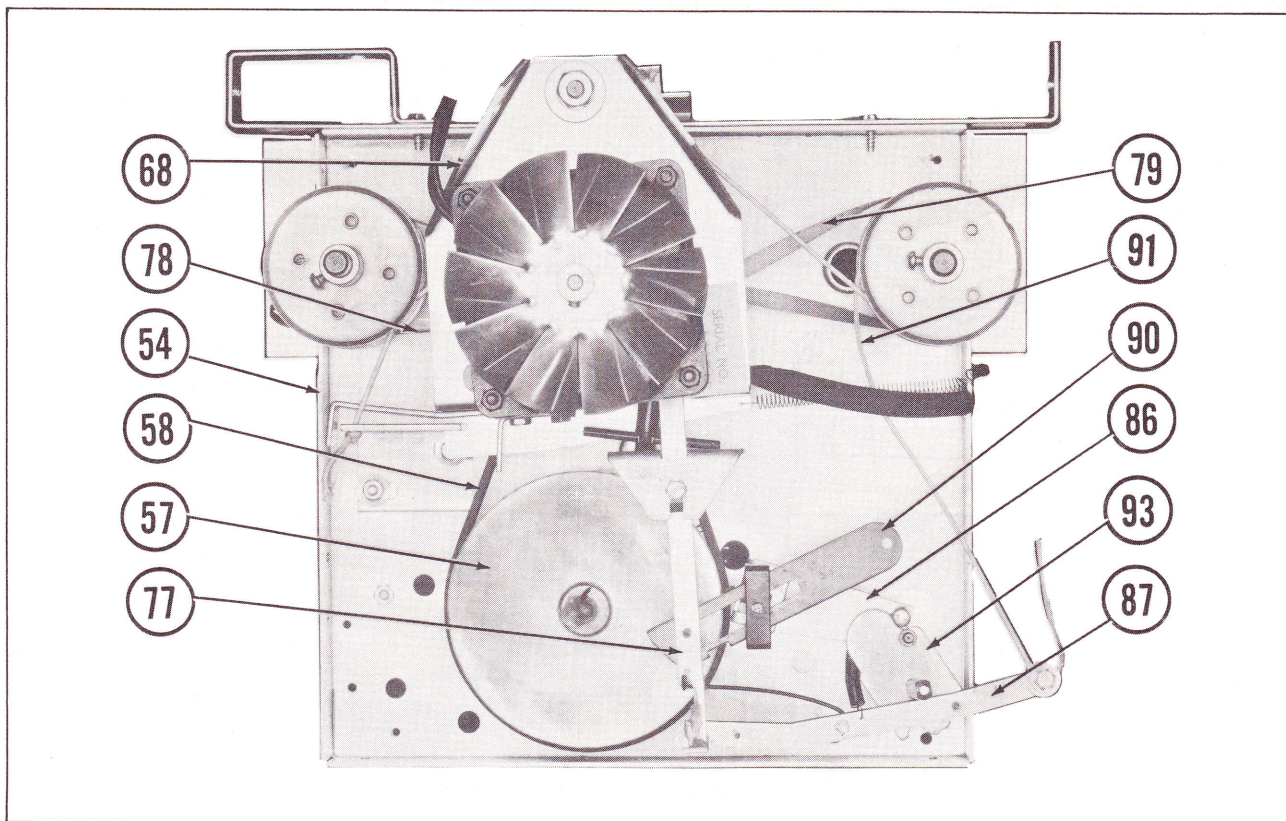


FIG.3 BOTTOM VIEW OF MECHANISM WITH MOTOR BOARD SUB PLATE REMOVED

erase head (45). Erase head assembly (45) is then moved up or down till only the top half of the tape is affected. When properly adjusted, only the top half of the tape will be erased.

Brake Release Bracket

Brake release bracket (80) can be adjusted by loosening screw (81) and moving bracket forward or backward. When bracket (80) is moved to rear of recorder, wind-rewind lever assembly (83) contacts

release bracket (80), giving brake cord (91) more slack. For less slack in brake cord (91), reverse the foregoing adjustment.

Spindle End Play

Spindles should have $1/32''$ to $1/16''$ up and down movement. Loosen set screw (60) in upper pulley assembly (61) and move pulleys up or down until correct amount of end play is obtained.

TROUBLE CHART

Symptom	Cause	Remedy
Fails to erase.	1. Erase head adjusting screw (44) in erase head assembly (45) loose, causing erase head to remain in Play or Idle position.	1. See "Erase Head Adjustment".
	2. Interlock shaft assembly (84) fails to go down far enough to let interlock slide (90) move to one side. Function selector knob will not go into Record position when this occurs.	2. Check for binding.
No Drive on record or playback.	1. Rubber drive belt (58) loose or broken.	1. Replace drive belt (58).
	2. Take-up belt (78) loose or broken.	2. Replace take-up belt (78).

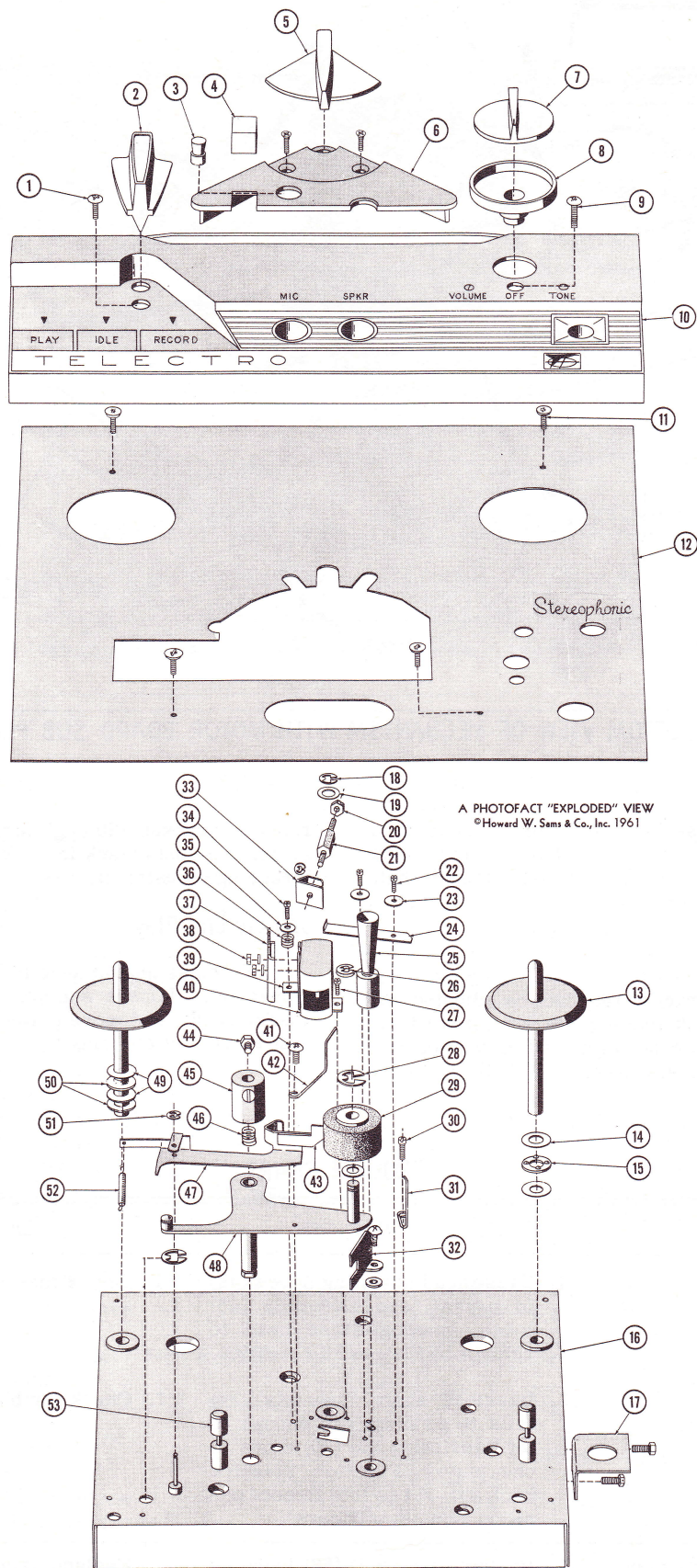


FIG.4A EXPLODED VIEW OF PARTS ABOVE BASEPLATE

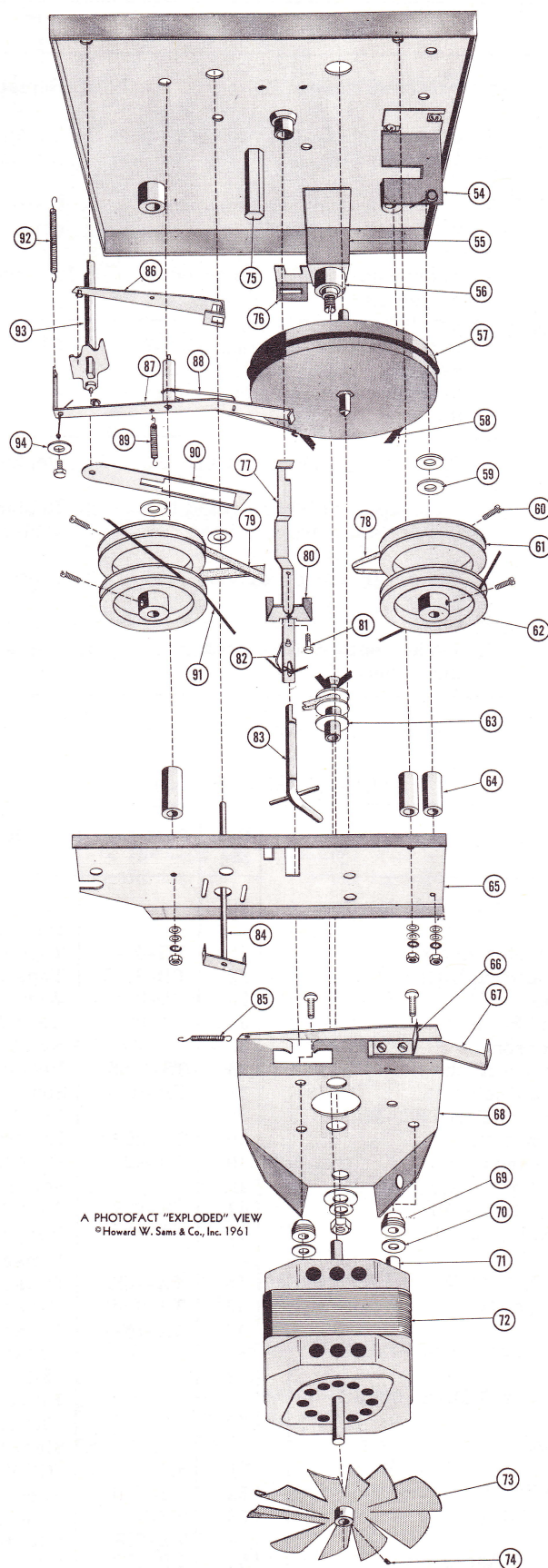


FIG. 4B EXPLODED VIEW OF PARTS BELOW BASEPLATE

TROUBLE CHART (CON'T.)

Symptom	Cause	Remedy
	3. Defective motor (72).	3. Replace motor (72).
	4. Connecting leads fouling fan assembly (73).	4. Dress leads so they will not contact fan assembly (73).
	5. Flywheel and capstan shaft binding.	5. Clean and lubricate flywheel and capstan shaft.
	6. Takeup spring (85) disconnected or defective.	6. Reconnect or replace spring (85).
Speed variation or wow.	1. Dirty or oily capstan sleeve assembly (25), capstan roller assembly (29), or motor pulley (63).	1. Clean with soft cloth and alcohol.
No wind or rewind.	1. Drive belt (58) loose or broken. 2. Take-up belt (78) or rewind belt (79) loose or broken. 3. Oil or grease on driving surfaces.	1. Replace drive belt (58). 2. Replace take-up belt (78) or rewind belt (79). 3. Clean with soft cloth and alcohol.
Function control does not operate.	1. Brake spring (88) broken or disconnected.	1. Replace or connect brake spring (88).

MECHANICAL PARTS LIST

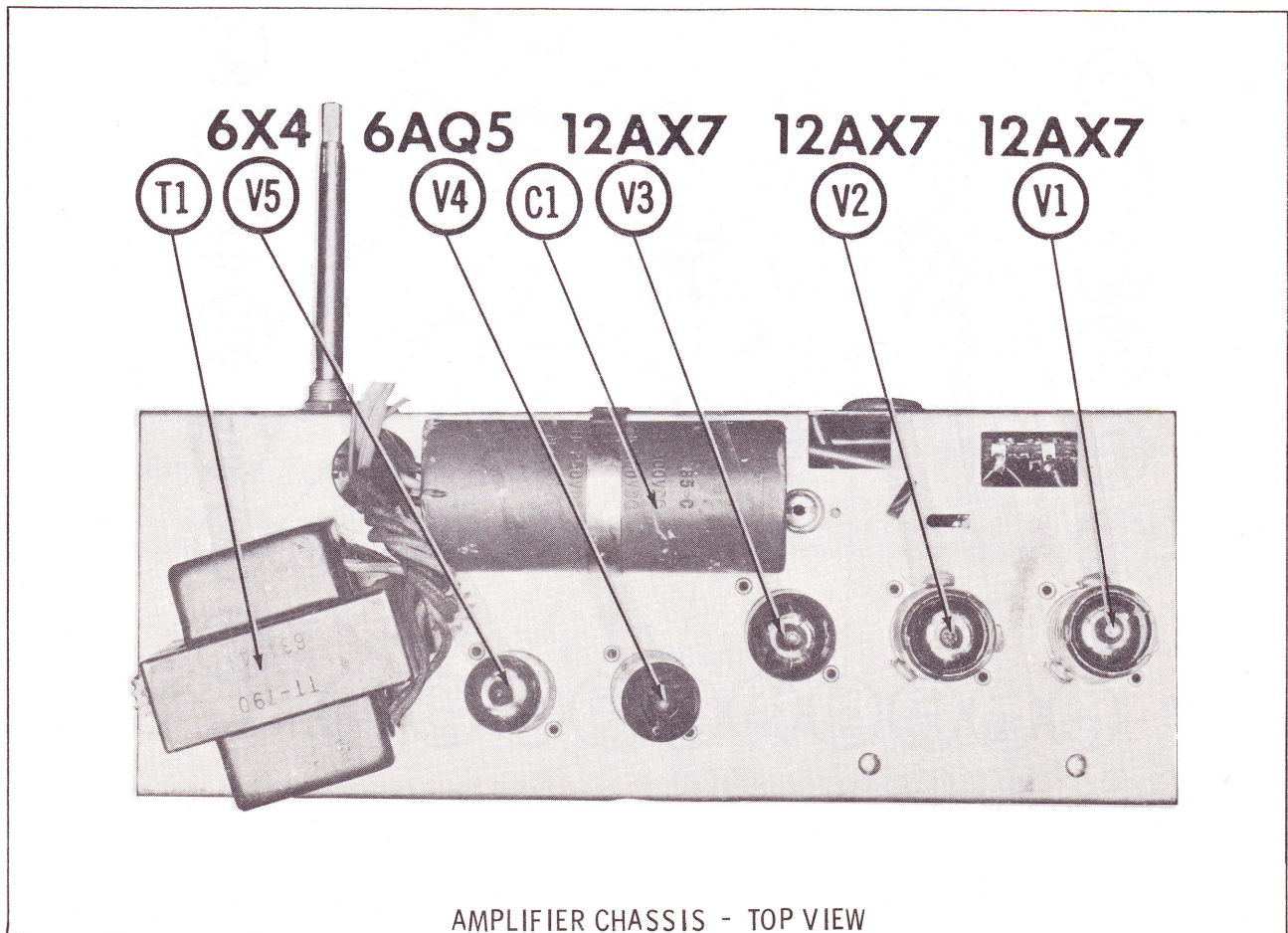
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1		6-32 x 3/4 Fl. Phil. Hd. M. Scr. Brass Pl.	30		Screw No. 6 x 1/4 Lg. Hex. Slotted Sht. Metal Type Z
2	TA-1426	Function Selector Knob	31	TG-414	Tape Guide, Upright
3	TK-256-1	Sound Head Lifting Knob	32	TB-2007	Tape Guide Bracket
4	TA-1427	Record Knob	33	TL-344	Wind-Rewind Latch
5	TK-243-1	Wind-Rewind Knob	34		Head Adjustment Screw 2-56 x 7/16
6	TE-274-1	Rear Escutcheon	35		No. 2 Flat Washer
7	TA-1428	Volume Control Knob	36	TS-1755	Record Head Spring
8	TK-241-1	Tone Control Knob	37	TP-1150	Sound Head Lifting Plate
9		6-32 x 1 1/8 Fl. Phil. Hd. M. Scr. Stl. Brass Pl.	38		No. 2 Hex Nut
10	TA-1429	Front Escutcheon	39	TB-2028	Recording Head Mounting Bracket
11		6-32 x 5/16 Lg. Truss Phil. Hd. M. Scr. Stl. Brass Pl.	40	TH-494	Recording Head
12	TP-1242	Motor Board Dress Plate	41		Screw 440 x 3/16 Phil.
13	TS-2152	Spindles	42	TE-479	Tape Release Guide
14		.315 I.D. x 9/16 O.D. .010 Washer	43	TP-863	Record Head Pressure Pad
15	TB-809	Ball Bearing Race	44		Erase Head Adj. Screw
16		Base Plate	45	TA-1123	Erase Head Assembly
17		Amplified Speaker Jack Bracket	46	TS-1659	Erase Head Spring
18	5103-25	"C" Washer	47	TA-1447	Pressure Pad Bracket Assembly
19		.255 I.D. x 1/2 O.D. x .010 Stl. Washer	48	TA-1186	Capstan Roller Plate Assembly
20		6-32 Hex Nut	49		.315 I.D. x 1/2 O.D. x .032 Thk. Fibre Washer
21	TP-983	Hex Shaft	50		.315 I.D. x 9/16 O.D. x .010 Flat Steel Washer
22		6-32 x 3/16 Screw	51	5133-25	"C" Washer
23		No. 6 Lock Washer	52	TS-1931	Pressure Pad Spring
24	TS-1854	Spring	53	TT-712	Tape Guide Post
25	TA-1204	Capstan Sleeve Assembly	54	TB-619	Excursion Limit Bracket
26	5000-25	"C" Washer	55	TB-878	Bearing Motor Pivot Bracket
27		Head Adjustment Screw 2-56 x 5/16	56	TB-635	Bearing Motor Pivot
28	5133-25	"C" Washer	57	TF-304	Flywheel Assembly
29	TA-1002	Capstan Roller Assembly	58*	TO-171*	*Linear "O" Ring Drive Belt
			59		.315 x 1/2 O.D. x .062 Washer

MECHANICAL PARTS LIST (CON'T.)

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
60		Set Screw 6-32 x 3/16 Round	79*	TB-999*	*Rewind Belt
61	TA-265	Upper Pulley Assembly	80	TB-858	Brake Release Bracket
62	TA-1183	Lower Pulley Assembly	81		No. 6 x 1/4 Sheet Metal Screw Type Z
63		Part of Motor Assembly	82	TS-1658	Brake Spring
64	TS-1630	Spacer	83	TA-1121	Wind-Rewind Lever Assembly
65	TA-1205	Motor Board Sub Plate	84	TA-1207	Interlock Shaft Assembly
66	TB-879	Rewind Stop Bracket	85	TS-2022	Takeup Spring
67	TH-515	Excursion Limit Hook	86	TA-1122	Capstan Roller Plate Cam Lever Assembly
68	TB-1061	Motor Mounting Bracket	87	TA-1004	Switch Detent Lever Assembly
69	TM-407	Motor Shock Mount	88	TS-1657	Brake Rod Return Spring
70		No. 6 Washer, Flat	89	TS-1681	Capstan Roller Plate Lever Spring
71	TS-1942	Motor Spacer	90	TS-1625	Interlock Slide
72	TA-1448	Motor Assembly	91	TB-1004	Brake Cord (25" Long)
73	TA-1206	Fan Assembly	92	TS-1905	Switch Detent Lever Spring
74		8-32 x 3/16 Slotted Set Screw	93	TA-1119	Switch Shaft and Cam Assembly
75	TS-1270	Drop Spacing Stud	94		No. 6 Flat Washer
76	TB-859	Brake Rod Guide Bracket			
77	TA-1128	Brake Rod Sub Assembly			
78	TB-998	Takeup Belt			

* Linear "O" Ring Drive Belt
Walsco Part No. 1410-14

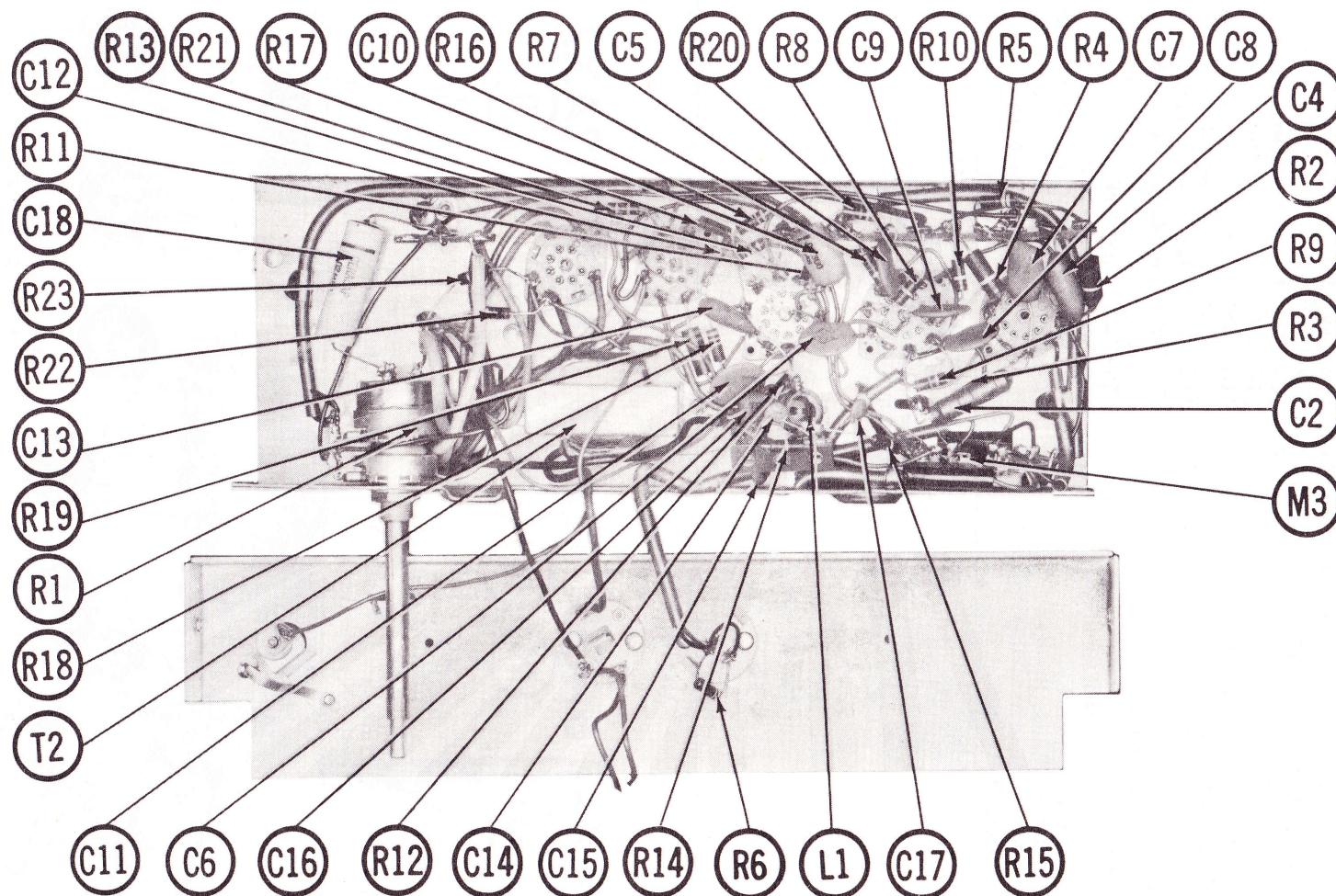
* Rewind Belt, Walsco Part
No. 1409-04



AMPLIFIER CHASSIS - TOP VIEW

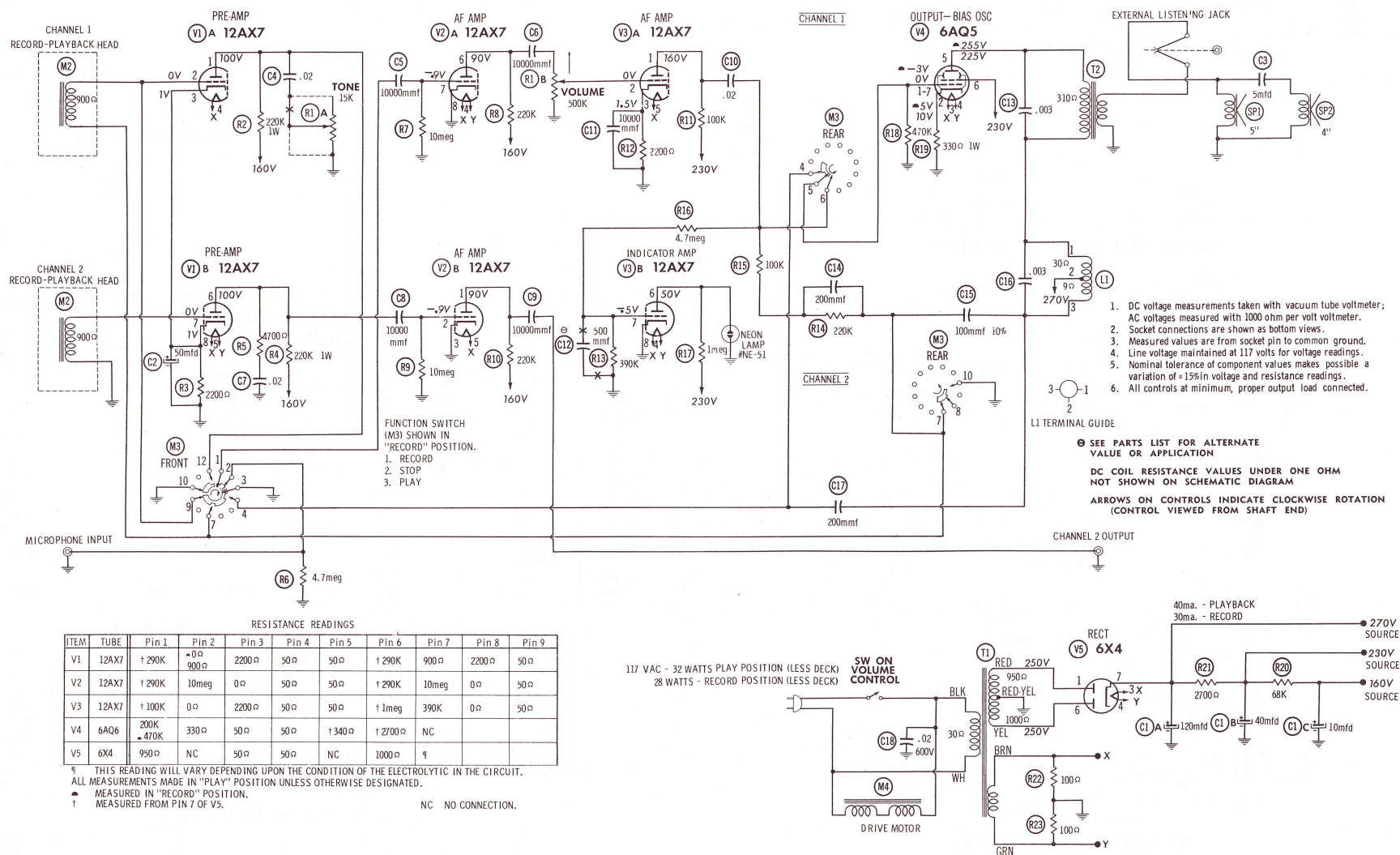
TELECTRO
MODEL 1975

FOLDER 16



AMP CHASSIS - BOTTOM VIEW

TELECTRO MODEL 1975



A PHOTOFACT STANDARD NOTATION SCHEMATIC
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PARTS LIST AND DESCRIPTIONS

TUBES

GENERAL ELECTRIC			RAYTHEON			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Preamplifier	12AX7	V4	Output-Bias Osc.	6AQ5			
V2	AF Amplifier	12AX7	V5	Rectifier	6X4			
V3	AF Amp. -Indicator Amp.	12AX7						

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	TELECTRO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1A	120	300	TC-1969	PR4-300	BBRT0196	WQ405	CDBQ-1005	TVA-3563	
B	40	300							
C	10	250							
C2	50	3	TC-1550	PTT-3050	NLW50-3	TT6X50	ML50-3	TE-1058	
C3	5	12	TC-1718	PTT-12005	NLW5-15	TT12X5	ML5-12	TE-1127	

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REMARKS	REPLACEMENT DATA					
				AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART PART No.	MALLORY PART No.	SPRAGUE PART No.
C4	.02	300V	Note 1	P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C5	10000			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C6	10000			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C7	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C8	10000			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C9	10000			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C10	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C11	10000			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	500			BPD-0005	DD-501	BYA10T5	CCD-501	B-350	10TS-T50
C13	.003	300V		P488N-003	D6-302	CUB6D3	6DP-1-302	GEM-623	6TM-D30
C14	200			BPD-0002	DD-201	L10T2	CCD-201	GP320	10TS-T20
C15	100	10%		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C16	.003	300V		P488N-003	D6-302	CUB6D3	6DP-1-302	GEM-623	6TM-D30
C17	200			BPD-0002	DD-201	L10T2	CCD-201	GP320	10TS-T20
C18	.02	600V		P688N-02	DD-203	CUB6S2	6DP-2-203	GEM-612	6TM-S20

Note 1. Not used in some versions.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	TELECTRO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	15K		TC-1694	F1-27			† QJ-1205R	Tone Volume Power Off-On
B	500K			R2-41			■ UE3905-S	
C	Switch			KR-1				

† "CONCENTRIKIT" equivalent: K-6 Kit with base elements and shafts: B11-118, P13-217 (Panel)
(Not available as a factory assembled unit). B13-133, R1-300 (Rear)
76-1 (Switch)

■ "STA-LOC" equivalent: FA153L, RU55A, OS2562, IS3000, US41.

RESISTORS (IRC or EQUIVALENT)

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R2	220K 1W		R10	220K		R18	470K	
R3	2200Ω		R11	100K		R19	330Ω 1W	
R4	220K 1W		R12	2200Ω		R20	68K	
R5	4700Ω		R13	390K		R21	2700Ω	
R6	4.7meg		R14	220K		R22	100Ω	
R7	10meg		R15	100K		R23	100Ω	
R8	220K		R16	4.7meg				
R9	10meg		R17	1meg				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		TELECTRO PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L1	Bias Osc. Coil	TC-1510				

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	TELECTRO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V @ .3A	500V CT @ .040A DC	6.3V @ 2A	TT-790					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TELECTRO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	5100Ω	3-4Ω	TT-791	A-2930	A-3877	24S51	S-3X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TELECTRO PART No.	QUAM PART No.	
SP1	5"	PM	3-4Ω	TS-1926	5A1	
SP2	4"	PM	3-4Ω	TS-1927	4A07	

MISCELLANEOUS

ITEM No.	PART NAME	TELECTRO PART No.	NOTES
M1	Head Ass'y.	TA-1123	Erase Record-Play (1/4 Track Stereo) Function (Rotary Wafer) Includes Pulley
M2	Head Ass'y.	TH-584	
M3	Switch		
M4	Motor Ass'y.	TA-1448	
	Fan Ass'y.	TA-1206	
	Microphone & Plug	TM-316	

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	TA-1426	Function Selector
Knob	TA-1427	Record
Knob	TK-256-1	Head Lifting
Knob	TK-243-1	Wind-Rewind
Knob	TA-1428	Volume
Knob	TK-241-1	Tone
Cabinet	TC-1990-SHC-2	With Cover

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	Use BELDEN No. 1765-B (6 Ft. Length) 1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor - Twisted)